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**Lessons from Vietnam: Should B-52 Squadrons Perform Both  
Nuclear and Conventional Missions?**

by

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## Preface

As a young co-pilot I often wondered why B-52s held onto the nuclear mission when there are other legs of the triad and the Cold War is over. The crusty Lt Cols talked of sitting alert for SAC and how that is where they learned all about nuclear generations and explained the importance of the bomber as a flexible option. When these warriors began to retire, I saw the nuclear mission becoming more diluted and uncertain. How was I as a young major going to teach the new generation about this vital mission when the rules were always changing? Why don't we split up the nuclear mission by squadrons so we can do it right? I landed at Barksdale after flying back from Guam on the night of the Minot incident and encountered a shocked 2<sup>nd</sup> Bomb Wing the following Monday. This will surely cause the missions to split or we would lose the nuclear weapons altogether, because we simply do too much with too little. We create our own orders in DTS, manage records and finances online and perform orderly room duties to the best of our ability; I forgot what my primary job was most days.

After seeing the Arc Light memorial on Andersen AFB in 2004 I wondered if those crews worried about returning to alert duty after seeing combat for the first time. Maybe all the hours spent in the AF Historical Research Agency will show that crews back then are much like we are now and we shouldn't repeat their dilemma. It's amazing how many lessons the Vietnam War holds for so many applications, so I hope this is a new comparison. I want to thank my Vietnam War history advisor Dr. Weaver for being excited about this paper and helping me get my point across. Thank you to all the staff at the AFHRA who dusted off the volumes of unit histories and declassified them for me. Most important of all, a heartfelt thank you to the crewdogs, past and present, who inspired my attempted contribution to making the B-52 missions, both nuclear and conventional, a warning to our enemies.

## **Abstract**

When nuclear weapons were accidentally flown from Minot AFB to Barksdale AFB in August 2007, the B-52 community got a rude awakening. The decline in nuclear deterrence focus and discipline began many years prior, but this incident ignited a debate among crewmembers as to why they still perform a mission that seems secondary to current conventional obligations. Many wondered if the nuclear mission would dissolve and others thought it was time to separate the missions so each could have its due attention. By looking back at the Vietnam War when B-52s first began conventional bombing and exploring how the crews balanced the two missions, one can see that the transition between the two was not always seamless. Strategic Air Command had several objections to using B-52s in a conventional role with the main one being degradation of nuclear readiness. This study uses a historical research method to determine the impact conventional missions had on the crews' ability to return to the demands of nuclear alert. They did not always fare well and the research shows that after flying conventional missions over Vietnam, most crews had a difficult time getting back into the nuclear mindset. The conclusion of this research is that B-52 squadrons should have one mission or the other, not both, so that each mission of national importance has undivided attention and focus.

## Introduction

Since the end of the Cold War and the dissolution of Strategic Air Command (SAC), there has been a lack of emphasis on the B-52's nuclear mission. The days of sitting alert are over and a predominantly conventional mindset has taken over the community, which is further compounded by the continual bomber presence in the Pacific theater supporting conventional operations. Although nuclear deterrence and delivery capability are crucial to national security, the recent conflicts have required new weapons skill sets to achieve wartime objectives. Conventional operations dominate current strategy at all levels to the detriment of nuclear readiness. "Stewardship of and focus on the policies, procedures, munitions handling processes, security, and operational exercise of nuclear weapons have been dramatically weakened."<sup>1</sup> Nuclear proficiency among all ranks and specialties has taken a backseat to the campaigns at present and led to disturbing incidents that brought the deficiencies in America's nuclear deterrence capabilities to the highest office in the US.

With recent concerns over America's ability to carry out strategic nuclear deterrence, one needs only to look into the past to see a similar time where conventional war detracted from the nuclear mission. There were objections during the Vietnam War over the use of B-52s in a conventional role for the very reason that it would weaken nuclear deterrence. Many of the concerns recognized by SAC leaders were never fully addressed to mitigate the temporary deterioration of the nuclear mission, specifically the impact on crew proficiency and their ability to flawlessly execute nuclear orders upon redeployment. Modern B-52 squadrons need a conventional designed operational capability (DOC) statement or a nuclear one, but not both, so neither mission suffers from divided attention. It is clear with the current restructuring efforts and creation of the Global Strike Command that the USAF had lost focus on and experience with

nuclear deterrence necessities and must rededicate itself to the nuclear role before casting more doubt on readiness.

Many crewmembers believe that B-52 squadrons should concentrate on nuclear or conventional training so they can give their unit's DOC the dedication it deserves without competing interests. Another option is ending the B-52's nuclear commitment altogether leaving the B-2 as the sole nuclear tasked bomber (B-1s lost the mission due to treaty requirements). There is a plan currently under review to stand up a nuclear-only B-52 squadron at Minot AFB North Dakota. This research will serve as additional justification for separating the missions, and a consolidation of objections from nuclear-minded pioneers in the hopes of avoiding past mistakes. The USAF recognized the need to preserve the nuclear mission once before—during the Vietnam War.

Reports regarding the breach in nuclear surety point to several root causes, one of which is the deterioration of nuclear emphasis because of the extensive conventional commitment B-52s have proudly adopted. “Dual-capable bomber and fighter units have—for a number of good reasons—concentrated their training and exercise resources on winning today’s conventional and regionally focused fight.”<sup>2</sup> SAC leaders realized in the 1960’s that conventional bombing, which is markedly different from nuclear employment, could potentially detract from the crews’ skill sets the nuclear task requires. The skills in question are not only the physical act of delivering weapons, but also the complicated command and control procedures (CCP) that determine a bomber’s actions. These skills and rote memorization of associated directives were once honed during the weeks bomber crews sat alert together in bunkered facilities, but the deployments to Guam and Thailand disrupted the retention of these habits. Two decades later, the end of the Cold War changed SAC’s traditional procedures and set further nuclear de-emphasis in motion.

The need for nuclear deterrence requires little explanation given the existence of nuclear armed nations able to strike the United States and her allies. Therefore, the serious nature of nuclear weapons employment and the in-depth training necessary to sustain zero defect handling requires a recommitment to the mission in order to restore public confidence and the knowledge of the professionals charged with the task.

### Boeing B-52 Stratofortress

In 1946, the Boeing B-52 Stratofortress was designed specifically to carry the atomic bomb of the day according to General Curtis LeMay's requirements.<sup>3</sup> It was the successor to the B-36 which “represents the solution to the strategic bombardment problem in 1942, whereas the B-52 is the solution in 1949.”<sup>4</sup> The Air Force needed a suitable bomber to counter the growing threat from the Soviet Union and perform the Strategic air war mission vital to America’s security and status as a world power.<sup>5</sup> The mission of the proposed bomber was centered on the growing arsenal of nuclear weapons, which rapidly began to take different forms from the large weapons of WWII. Not only were the actual warheads becoming smaller and lighter, but standoff air-to-surface missiles were in development to keep the B-52 out of heavily defended targets for survivability. Later a concern over the skies of North Vietnam, there was a “desire to protect the airplane from high attrition rates, thus not allowing the airplane to operate in heavily defended areas.”<sup>6</sup>

Another major consideration with the nuclear mission is crew coordination in the execution of command and control procedures. “In 1951, General LeMay surprised the Air Force Mockup Board when he requested a side-by-side cockpit for the B-52.”<sup>7</sup> This is relevant because non-verbal communication is imperative in the running of nuclear checklists. The

intercom between the bomber's compartments is rarely silent, so cross-cockpit visual cues help reduce chatter tremendously and allow for the exchange of information regardless of intercom use. The insistence on this configuration further confirms the intensive flow of information required to precisely employ nuclear weapons. The execution of the Single Integrated Operational Plan (SIOP) is a highly practiced orchestration with no room for error and even a few months' distraction can send the routine off-balance. SAC crews proved their nuclear ability when the first hydrogen bomb was air-dropped by a B-52B on 21 May, 1956 over the Bikini Atoll in the Pacific Ocean.<sup>8</sup> It wasn't until 1963 when General LeMay, now the AF Chief of Staff, "asked the AF Systems Command to study the conventional capability of the B-52."<sup>9</sup>

Although always envisioned as a nuclear warhorse, the adaptability of the B-52 in terms of weapons systems is legendary. "The Air Force made the conscious decision to allow the B-52 to be an 'alternate' bomb carrier when it accepted Model 646-17 in January of 1947."<sup>10</sup> The Vietnam War sparked the use of America's nuclear bomber in a conventional role and "when the first B-52s deployed to Southeast Asia (SEA) in June 1965, the event marked the first time the big bombers dropped any weapons in wartime and also the first use of the airplane for close air support, surely not a mission envisioned by its developers."<sup>11</sup> Among the most notable adaptations were the Big Belly modifications on the D Models beginning in December of 1965, which increased the total of 500 pound bombs from 51 to 108 carried both internally and externally.<sup>12</sup>

The once nuclear-specific bomber was used for nine years during Arc Light and Linebacker II missions, reaching a peak sortie rate of more than 3000 per month by 1972. "By August 1973, when the United States stopped air missions over Southeast Asia, the B-52s assigned to the theater had flown more than 126,000 missions, with a loss of 31 aircraft. They

dropped more than 2.6 million tons of bombs.”<sup>13</sup> This impressive total came at a price to the aircrews shot down and the time lost dedicated to their primary mission. It is important at this point to understand SAC’s mission focus in the early 1960’s and the leadership’s strong opposition to using a nuclear bomber for a limited war in Vietnam.

### Objections to B-52s in SEA

Strategic Air Command’s mission of nuclear deterrence was the number one priority and to suggest that anything else might compare, especially a limited war in Vietnam, was heresy. “SAC’s institutional imperative for nuclear war was amplified by the senior absolutists dominating SAC who strongly resisted committing resources to Southeast Asia in the early 1960s.”<sup>14</sup> These objections came straight from the top to include CINCSAC Gen Power who “told the Air Staff not to ‘talk to me about that; that’s not our life. That’s not our business. We don’t want to get in the business of dropping any conventional bombs. We are in the nuclear business, and we want to stay there.’”<sup>15</sup> The resistance was so fierce that fighter brigadier general John W. Vogt recalled in an interview the occasion when he “flew to SAC headquarters to convince Power to explore possibilities for the conventional use of B-52s, Power banished him from Offutt AFB and directed SAC not to allow Vogt to return to any SAC base.”<sup>16</sup>

Given the great conventional successes the B-52 has demonstrated in the last two decades it is difficult to understand the severe opposition of senior leadership in the 1960s, but bomber major general Howard A. Davis summed up the climate at the time when he stated, “he would have put anyone in a straight jacket who told him a few weeks before that he would be using B-52s to drop iron bombs on guerrillas in Vietnam.”<sup>17</sup> The emotional statements of these generals are rooted in the institutional belief that SAC never wanted to risk its prized bomber in what was

essentially a civil war halfway around the world. “Conventional ‘little wars’ were unimportant compared with keeping SAC strong.”<sup>18</sup>

Emotion aside, SAC had three main objections to allowing B-52s to participate in a counterinsurgency war: “first, it would detract from its SIOP and alert commitment; second, it would take too much time to reconfigure the aircraft and resume control for strategic operations, if needed; and third, the B-52’s systems could be compromised in Southeast Asia, which would reduce its deterrent credibility in general war.”<sup>19</sup> A fourth reason that SAC would never have admitted to, is that in no way could crews be fully prepared to employ conventionally given the inflexibility of the missions they practiced. “B-52 crews had a two-week course on conventional operations, then they went on a six-month rotation to Guam. They went ‘with only the barest introduction to conventional tactics’ and used modified nuclear bombing procedures. They lacked institutional innovation.”<sup>20</sup>

Lack of innovation is a theme that recurs throughout the war and can be seen in the leadership, planning, and tactics, techniques and procedures (TTPs). A fifth reason to not attempt to fulfill two missions simultaneously, only recognized after several years, was the severe toll going combat temporary duty (TDY) just to return to sitting alert would have on aircrews and their families. “In 1968 the new SAC commander, fighter General Holloway, expressed concern with the stress that alert requirements and rising sortie demands in Southeast Asia generated on his aircrews and aircraft.”<sup>21</sup> Of these five reasons not to demand more of the strategic deterrence force, this research will focus on number one: executing conventional missions would detract from SIOP, more specifically; aircrews should not be expected to split their attention between two missions of national interest.

Despite all the resistance from Gen Power, in December 1964 Gen Ryan, who was more agreeable to supplying B-52s under SAC's control, took command. Even the title of the mission shows the ambiguity the crews would undertake and reads more like an identity crisis. The mission statement was "Strategic aerospace warfare on a limited or global scale using conventional and/or nuclear weapons."<sup>22</sup> Needless to say, it was a confusing task with unlimited variables that sounds hauntingly similar to "Global Deterrence Force (GDF) with conventional options." Maybe in an attempt to maintain relevance with the increasing intercontinental ballistic missile (ICBM) inventory, or under pressure from the "growing minority in SAC, especially in lower echelons, [that] became 'bored with alert' and excited about joining MAC and TAC in action in Southeast Asia,"<sup>23</sup> SAC entered the Vietnam War with 30 B-52s deployed to Guam.

### Nuclear Bombers in Vietnam

Although SAC's responsibilities covered the range of air refueling, ICBMs, reconnaissance, and several direct reporting units, the focus here is on the performance of the crews within the strategic bombardment wings stationed in Guam and Thailand. "From 1965 to 1973, 15<sup>th</sup> AF bombardment and refueling wings had a dual mission: support the war effort in Southeast Asia with personnel and equipment and maintain a nuclear deterrent capability at home."<sup>24</sup> Later in the war, the HQ 8<sup>th</sup> AF transferred to Anderson AFB, Guam on 1 April 1970 to oversee B-52 operations and to compliment SACADVON already coordinating strikes for the 7<sup>th</sup> AF and MACV. "Its operations consisted mainly of Arc Light conventional bombing and KC-135 tanker missions in Southeast Asia, although 8<sup>th</sup> AF personnel were also vital to Commando Hunt V and Linebacker II missions and bombing operations in Laos and

Cambodia.”<sup>25</sup> Much has been written about the poor operational span of control SAC HQ wielded from CONUS and in this case, it’s another indicator of how the training and employment of crews would proceed.

As stated before, the limited conventional spin-up prior to deployment left much room for improvement. “Initially, most of the crews on temporary duty (TDY) at Guam had ‘little or no experience’ in formation flying and pattern bombing. Many were older pilots who had grown accustomed to years of disciplined procedural adherence inherent in executing the SIOP.”<sup>26</sup> The significance of this statement is twofold: first, the lack of formation flying led to the botched aerial refueling rendezvous that cost two B-52s in a mid-air collision on their first Arc Light mission on 16 June 1965;<sup>27</sup> and second, it demonstrates how it requires years of discipline to properly execute the nuclear mission to a zero-defect level. All weapons employment requires initiative and flexibility, but innovation was not a trait common with the SIOP mission and much of the flying was following strict flight paths often requiring low level penetration over enemy territory. SAC was determined to keep their assets under close hold and much of the fledgling TTPs for flying conventional missions came from within the community.

Even after the commitment of forces to Southeast Asia started, SAC was determined “to keep conventional warfare from crippling the command’s ability to perform its nuclear bombing mission.”<sup>28</sup> Much of the bombing over South Vietnam and Cambodia was flown above twenty thousand feet to avoid ground fire and above thirty thousand over North Vietnam due the prevalence of surface-to-air missiles.<sup>29</sup> Flying at these altitudes was nothing new to the crews, but employing conventional weapons with a greater need for accuracy was. The concern at the time was not that the crews would perform poorly, but that “crews would lose their skill at flying low-level missions of the kind envisioned for a nuclear war with the Soviet Union.

Consequently, B-52 crews rotated back to the United States after six-month tours of temporary duty in the Pacific.”<sup>30</sup> They would rotate back to alert status and spend the next six months engrossed in the SIOP mission that often required recertification in CCP procedures. Even to individuals unfamiliar with either mission, it is conceivable for them to see how the two missions can cause a negative transfer of knowledge and a dilution of both.

The other challenges crews faced in theater besides the faulty planning packages from SAC was the lag time in communicating problems with the missions and getting them resolved promptly. The distance between planners and those executing the missions would impact the crews with dire effects later in the war. The lack of radar fix points and limited terrain imaging to find new ones caused much of the bombing to be flown using ground beacons to determine bomb release points. Neither the higher altitudes, nor the beacon bombing was cause for concern to the crews who were quickly adapting to the challenges given them. The relatively low-threat environment allowed crews to hone their skills at mid-altitude conventional bombing and the shock factor toward the enemy was significant. The Arc Light missions proved that the B-52 was a viable weapon in both Air Interdiction and Close Air Support, but it was the Linebacker II missions that brought to light SAC’s faulty TTPs.

### Linebacker II

Linebacker II is the subject of much debate and many informative books. The main point to keep in mind here is that the missions of Linebacker II were flown with modified nuclear TTPs that added to the loss of fifteen B-52s being shot down. Limited understanding of time compression over target, multi-axis attacks, chaff corridors, overlapping electronic warfare coverage, non-maneuvering bomb runs, and post target turns combined with poor feedback

procedures led to painful lessons for aircraft and crews. Although the learning curve was steep the results of the “Christmas Bombing” arguably brought the North Vietnamese back to the Paris peace talks. In light of SAC’s initial mistakes, they did make some positive changes that led to a “full complement of more than a hundred B-52s, one-wave compression, a chaff blanket, and replacement of the sharp post-target turn by at most a gentle dogleg.”<sup>31</sup> There were still losses due to a “maximum effort” attitude that did not take into account the mutual jamming support concept. “Both of the B-52s lost that night had been deprived of normal jamming support when one of the three ships in its cell had aborted with mechanical problems. But SAC did not take the natural next step of requiring an entire cell to abort if one of its three B-52s could not complete the mission.”<sup>32</sup> Although mistakes were made, the Linebacker II missions proved B-52 crews are capable and willing to perform conventional bombing over high-threat targets.

### Return to the EWO Mission

The main focus of this research examines how the returning crews resumed their nuclear mission and the impact concentrating solely on conventional operations had on performance. The best way to judge nuclear deterrence performance is by examining the results of Generation exercises, checkrides, and overall readiness to perform the mission. According to SAC unit histories, crews returning from Southeast Asia were under great scrutiny to get back in the nuclear mindset. Of the fourteen-plus heavy bombardment wings under the 8<sup>th</sup> and 15<sup>th</sup> Air Forces that saw combat in Vietnam, several of the units encountered difficulty in getting the crews back up to SAC’s stringent standards. The following memorandum dated 10 April 1974 from Col James Light, CC 28<sup>th</sup> BW at Ellsworth AFB, shows a trend many of the crews returning from Vietnam experienced:

Periodically we need to review our operational procedures and evaluate our adherence to good, sound practices. Southeast Asia has been an operational area where deviations from standard procedures and from the checklist have occurred and occasionally with good cause to get the mission accomplished. Once crews are exposed to this environment, where deviations occur and the sky doesn't fall, it leads to continued deviations and individualism. I must admit that individualism and the ability to deviate promotes, on occasion, getting the job done, but carried to excess breeds a rebel rather than a polished, skilled force.<sup>33</sup>

This trend is often observed within units returning from combat and being away from the predictability of the home dome for long periods of time. Although not directly tied to the nuclear mission, commanders were dismayed by some of the bad habits crewmembers acquired while TDY and this was not a trait desirable in SAC and their long legacy of adherence to standards. The following examples show how the long periods of conventional missions took a toll on nuclear deterrence back in the United States.

### Busy Notice

The first case involves the 5<sup>th</sup> Bombardment Wing (Heavy) stationed at Minot AFB, North Dakota. From January to March 1974, the wing was in a state of reconstitution and preparing for their upcoming Nuclear Operational Readiness Inspection (NORI). SAC was understandably concerned with Emergency War Order (EWO) readiness after suspending routine inspections until aircraft and personnel returned from SEA duties, so the 15<sup>th</sup> AF decided to implement the exercise "Busy Notice" in January of 1974.

As with most SAC exercises prior to NORIs, the entire base is tested on its ability to carry out the nuclear deterrent mission. "'Busy Notice' was an exercise which tested the readiness of units that had returned from Arc Light during the previous quarter."<sup>34</sup> "The program consisted of flying three sorties per day until all available combat ready crews had

participated.”<sup>35</sup> The concern that crews, maintainers, and other base agencies had lost proficiency in nuclear operations was well founded when the results of “Busy Notice” were released the first week of February. According to the unit historical record, “Many mistakes and deficiencies cited were due to a lack of knowledge or proper procedures, rules, and regulations.”<sup>36</sup> Due to the unsatisfactory nature of the exercise results, all aircraft commanders and staff members were required to read the results.<sup>37</sup>

Without getting into the technical aspects of the problem areas, “an analysis of Busy Notice results and the accomplishments of crewmembers during daily flight training, several areas were found to need greater emphasis: Low level navigation, radar scope tuning procedures, alternate bombing procedures and bombing/navigation system malfunctions (which seemed to be occurring all too frequently).”<sup>38</sup> As previously mentioned, SAC’s concern of crews losing proficiency in flying low level had come to fruition from the consistent high altitude conventional missions. The other problem area directly attributable to the lack of continuity was the loss of CCP proficiency.

Col Mac Laren, the 5<sup>th</sup> BW CC, “was displeased with the level of knowledge shown by several crews on EWO information,” and “suggested that the tactical squadron commanders and training section insure that corrective actions were taken before this became a serious problem area.”<sup>39</sup> Col Jones, the 5<sup>th</sup> BW Deputy CC also recapped the “Busy Notice” results with a memorandum to all aircraft commanders and DO staff members.

The attached message, containing analysis of the results of “Busy Notice”, exercise for the purpose of testing the readiness of units recently returned from “Arc Light” has some great “do’s and don’ts” in it. There are many lessons to be learned from the mistakes and deficiencies which were discovered. Those caused by a lack of knowledge of proper procedures, rules, and regulations are especially interesting and have to be placed under the heading “Self-inflicted Wounds.”<sup>40</sup>

The 28<sup>th</sup> BW saw similar results from their crews and also received the same following message from the 15<sup>th</sup> AF with regards to “Busy Notice” results. “Generally, your crews, even the most experienced, have been provided considerable sorties and training exposure. As evidenced, some of these crews require more in-flight attention than others over the next two weeks.”<sup>41</sup> It is clear from this statement that 15<sup>th</sup> AF noted nuclear deficiency among its tenet wings. Although not all the problems encountered during “Busy Notice” are directly related to conventional operations in SEA, it is simply human nature to make mistakes on tasks not performed on a regular basis.

The 22<sup>nd</sup> BW at March AFB (also within the 15<sup>th</sup> AF) was in the process of reconstitution in January 1974 and did not participate in the exercise until March of that year.<sup>42</sup> Those crews that were present had similar concerns with generating alert aircraft after having just returned from SEA duties. “The requirements for the generation of the alert line were new to some members of the Wing while the ‘old heads’ found that after being away for so long, they had to re-learn many procedures.”<sup>43</sup> The above statement does not mean that the Wing performed poorly, in fact, their performance was satisfactory, but it does highlight that continuous conventional operations affects even the more experienced crewmembers. “Busy Notice” was just one exercise testing the readiness of Arc Light crews, the following example is the standardization and evaluation results from returning crews and their associated deficiencies.

### Checkrides

The 7<sup>th</sup> BW at Carswell AFB was a schoolhouse for upgrade training and supplied crews and aircraft for the Vietnam War from 1965 to 1973. Many of the crews flew in Linebacker II and learned much from flying the bombing missions over Hanoi. The crews began to redeploy

in 1973 and most were back by January of 1974. The following numbers are from the standardization and evaluation review minutes and address the high checkride failure rates of some of the crew positions. “During the quarter ending 31 March, the Bomber Branch administered 171 evaluations. Five Conditionally Qualified and 20 Unqualified were awarded.”<sup>44</sup> These numbers have little significance until compared to the rest of SAC and units that did not deploy to SEA. “Overall, for this three month period, the bomber Standardization/Evaluation failure rate was 25.3 percent—well above 2<sup>nd</sup> AF and SAC Oct-Mar 74 averages of 5.6 and 6.8 percent respectively.”<sup>45</sup> The narrative from the minutes goes on to explain the high failure rates stating, “Generally, the problem seemed to be a combination of inexperienced new aircrews, widespread training deficiencies and a return to EWO training missions for crews that have been Arc Light oriented for a long period of time.”<sup>46</sup>

It is not uncommon for new crewmembers to fail checkrides, but combat hardened crews should be well versed in their missions. It is clear at this point that nuclear deterrence procedures are a perishable skill and if left to atrophy, even more experienced crews can exhibit lapses in judgment. It was noted by the 7<sup>th</sup> BW historian, who worked closely with the commander to preserve the operational history of the unit, that the transition from Arc Light to EWO oriented mission requirements was difficult for crewmembers.<sup>47</sup> The final examples are Nuclear Generations performed by the 7<sup>th</sup> and 2<sup>nd</sup> BWs where the transition from conventional to nuclear alert led to substandard performance.

#### Nuclear Alert Generation

During the week of 22 October 1973 the 7<sup>th</sup> BW generated 13 aircraft to test the readiness of available personnel and those who had recently returned from SEA. Again, the concern was

the ability to perform the EWO mission after the 7<sup>th</sup> had spent the last 23 months in a degraded SIOP posture and “all Carswell-based operations were geared for training aircrews to SEA combat ready status.”<sup>48</sup> The results of the Generation came out on 8 November and covered many minor crew discrepancies such as reporting for alert without required flight equipment and handling Positive Control Material when unarmed.<sup>49</sup> Attention to detail is the key to a successful Generation as is a thorough understanding of the regulations that govern them. Since this practice is designed to mirror the real world ability to deliver weapons if directed to, all mistakes are heavily critiqued.

The report cites two main reasons for the mistakes, “No Generation had been held since Bullet Shot operations were initiated. Since the 7<sup>th</sup> BW had degraded SIOP responsibilities, personnel knew of their general EWO responsibilities, but orientation toward details was lacking.”<sup>50</sup> Not only were the crews rusty, but so were support assets as illustrated by the simple statement, “Maintenance was oriented toward peace time criteria.”<sup>51</sup> It does not take long for all agencies involved to lose focus on the mission when not exercised on a regular basis. All aircrew skill sets have currencies, so what is the longest time a unit can disregard the nuclear mission before becoming ineffective and require extensive retraining? Considering all the parts in play to properly execute the EWO mission and the strategic importance, the less time spent doing other tasks the better. Needless to say, it wasn’t long before the 19<sup>th</sup> Air Division of SAC, Brigadier Gen Rew sent the following memorandum:

The recent SAC-wide alert revealed serious deficiencies in the conduct of the aircraft generation required of the 7<sup>th</sup> BW. It is realized that the organization has had no exercise of this type for many months; however, it is vital that an acceptable capability be maintained at all times within the limits of available resources.<sup>52</sup>

There was little empathy in the remainder of the document for the conventional mission being supported in SEA and Brig Gen Rew went on to say, “it is advisable that a practice generation exercise of the 7<sup>th</sup> BW be conducted in the near future.”<sup>53</sup>

Units within the 2<sup>nd</sup> BW at Barksdale AFB also conducted an alert force Generation exercise in September of 1974 where the crews had difficulties with correctly responding to exercise messages. Knowing what response to take when given an Emergency Action Message (EAM) is directly tied to proficient CCP knowledge and practice. Headquarters 8<sup>th</sup> AF had observed improper responses to exercise EAMs, “specifically, alert crews have started engines and even taxied in responding incorrectly to exercise messages.”<sup>54</sup> Mistakes like these are completely unacceptable now, just as they were during the reign of SAC, but the connection between combat in SEA and these cases of improper CCP can only be surmised. “These actions are hazardous, wasteful, and completely uncharacteristic of the professionalism previously demonstrated by SAC combat crews.”<sup>55</sup> What Lt Gen Hoban meant by “previously demonstrated” is unknown, but could refer to the influx of new crewmembers, pre-Vietnam performance, or as a motivation to instill pride. This was the kind of emphasis placed on the nuclear readiness of the nation when SAC was responsible and it must be replaced by a modern, flexible command that is directly accountable.

### Divided Attention

Some of the units researched showed no signs of difficulty in returning to the EWO mission. Whether the lack of issues were omissions from the historians or the units were the best in SAC, there is plenty of information available to support the link between the degradation of the nuclear mission and performing conventional operations for extended periods of time.

Unfortunately, many of the NORIs graded by the Inspector General cannot be declassified, but those with a secret clearance can discover other areas of interest within SAC shortly after Vietnam. There was also confusion after the introduction of conventional operations in the area of training, because now crews were responsible for maintaining non-nuclear skills and that led to a division of priorities. The 72<sup>nd</sup> Strategic Wing stated a “lack of a clearly defined mission”<sup>56</sup> as a significant problem area in their July thru September 1973 Quarterly Activity Report. “This created problems in establishing training/EWO alert priorities and resulted in many changes to our flying schedule by increasing/decreasing EWO alert commitments on an irregular basis.”<sup>57</sup> Essentially, the end of combat in Vietnam meant it was time to resume nuclear alert, but be ready to fly conventional missions at the same time if required to do so.

It is clear that even though B-52s were designed to deliver nuclear weapons, the aircraft and crews have adapted well to employing the widest range of conventional munitions in the AF inventory. The amount of technical orders the offense compartment needs to know is staggering, with many of the weapons unique to the B-52. They are the only platform to launch cruise missiles, both conventional and nuclear, the only aircraft that carries the M-117 750 pound GP bomb, and the only aircraft expected to carry a wide range of aerial sea mines for the Navy. With the addition of the targeting pod and self-designating for laser guided bombs, B-52 crews have their hands full with just the sample of conventional weapons mentioned above. Add onto that burden the complexities of the nuclear mission and there is little wonder that mastery has fallen to the wayside.

The aircraft and her crews are extremely adaptable and continue to prove their relevance in conventional conflicts. B-52s are expected to maintain their dual combat capabilities until the year 2040, but at what cost to the nuclear mission? Is it reasonable to expect all the agencies

involved in maintenance, loading, and support to keep up with all the capabilities at a zero failure rate? There is a saying that crews half-heartily succumb to, and that is “Jacks of all trades and masters of none.” Just as crews of the past fought a conventional war in Vietnam and returned to the necessity of sitting alert, crews of today rotate out to conventional deployments and return to Nuclear Surety Inspections with a divided focus. Even the crews of SAC saw difficulty in that transition and had far fewer weapons to keep proficient in. The following comparisons help to explain why a division of the missions by unit is advisable.

### SAC vs. ACC

SAC had a relatively bigger budget for bombers than ACC and had a great deal more influence with regard to nuclear matters. Nuclear deterrence was still center stage for the top brass and the Cold War was alive and well. Crews sat alert and practiced their craft on a daily basis and had the support they needed. There were vastly more bomb wings all over the country and hundreds of more crew members and jets to support a conventional bombing requirement in SEA. “Many aircrews began to average 14 months of TDY every three years,”<sup>58</sup> but given the number of crews available, the commitment was manageable. SAC was able to recover from the Vietnam War in terms of getting their crews back up to nuclear standards, but the switch to conventional and unconventional small wars and the end of the Cold War was ultimately SAC’s demise. It is important to change as the world climate does, but as the Schlesinger reports indicate, there was no individual in charge of nuclear stewardship when placed under ACC leadership. “There was no single command to advocate for the resources required to support nuclear capabilities. Collectively this meant that no one Command in the Air Force had ‘ownership’ of the nuclear mission.”<sup>59</sup> Compare and contrast the situation the B-52 community

is in today and there is no doubt the conventional demands of the GWOT have degraded the nuclear mission.

The condition today, at least until Global Strike Command stands up, is that SAC is gone, the Cold War was won and the GWOT has clouded most of the interest in B-52s maintaining a nuclear role. There are only two B-52 wings and less combat coded aircraft than ever before, with more impending cuts. B-52 hard crews (crews that regularly fly together) rarely exist unless deployed, and there are less than one hundred to date. They no longer sit alert together gaining experience from the vanishing SAC warriors and the amount of required ground training items that detract from primary duties seem to expand every year. It simply has become the burden of the Air Force to do more with less while maintaining the same level of proficiency. Additionally, the few units responsible for the nuclear mission within ACC sometimes receive less funding than squadrons with only one mission. “Regarding the commitment to provide organized, trained and equipped nuclear capable bomber forces, there is general acknowledgment that there has been substantial decay in the vitality, readiness, and resourcing of this mission.”<sup>60</sup> Nuclear emphasis is returning just in time before more critical mistakes are made and the assignment of the Global Deterrence Force concept is the right direction as long as conventional missions are strictly prohibited during that time. The forthcoming recommendations are based on personal experience and the historical perspectives seen in many units upon returning from duty in the Vietnam War.

### Recommendations

Of the three logical courses of actions, only one allows the B-52 to keep nuclear focus untainted. Allowing individual squadrons to keep both missions runs the risk of diluting either

one and does not allow for the attention the nuclear mission requires. Additional capabilities and weapons are on the horizon for the B-52 and her crews so the mission will only become more varied. Removing nuclear weapons from the B-52 altogether takes the flexibility of the recallable bomber out of the triad and is not a likely option since B-52s are the only platform able to carry Air Launched Cruise Missiles. Given the complexity of CCP, the necessity of the Personnel Reliability Program and the importance of nuclear deterrence, one squadron should devote itself solely to the mission. It should be a controlled two year tour where the only mission allowed is nuclear. Volunteers can request to stay beyond two years and the squadron must maintain overlapping continuity with seasoned nuclear instructors. All sorties and Weapons Systems Trainers are devoted to honing skills for the nuclear mission leaving no doubt in the airman's mind that this task is the priority and is treated as such by senior leadership. Devoting one squadron and all its focus to nuclear employment and deterrence theory will create a highly skilled force ready to employ America's most powerful weapons.

### Summary and Conclusions

The B-52 was given the consideration for “alternate bomb” carrying at its inception and it has certainly performed more missions and employed many more weapons than its creators envisioned. B-52 crews have met the challenge of mastering both the missions and all new weapons to provide a versatile and lethal bombing platform. When the SAC leaders objected to the dual use of B-52s in the 1960’s, they had no way of knowing that future conventional accomplishments would contribute to the recent mistakes the Air Force is recovering from today. The dual missions are not the only cause, but certainly a large contributing factor because both missions demand a complex, thorough knowledge of all the requirements. Allowing B-52s to

see combat in Vietnam helped both the crews and the aircraft evolve into lethal instruments of American airpower and was a fortunate historical event to extend longevity.

The lessons from Linebacker II were many for all the organizations involved and have shaped many of the TTPs still in use today. The lessons not learned well were those of the crews struggling to keep proficient at both nuclear and conventional weapons employment as the face of war changed. It is fair to say that after long exposure to conventional mission requirements that crews tend to lose proficiency in the equally demanding role of nuclear deterrence. This was seen in the poor performance of returning crews in nuclear Generation exercises and the high failure rate of checkrides in regards to nuclear related tasks. Both of these indicators show the degradation of overall nuclear readiness and certainly caught the attention of SAC leadership. Only after a return to “normal” nuclear operations did crews eventually recover their Generation skills and were able to do so by the great emphasis placed on the mission by SAC and US policies during the Cold War.

The successful regeneration of nuclear deterrence has yet to fully develop and the measurement of success is open to interpretation. It may be years of error-free stewardship or passing grades on Nuclear Operational Readiness Inspections that prove the mission is on track, but one thing is certain, the separation of missions by B-52 units would greatly aid in the task. The ability of the post Cold War and former SAC warriors to balance the missions is commendable, but the drawn down of forces, de-emphasis of the mission, and complexity of conventional obligations is too much to reasonably ask of crews spread thin by the GWOT. If there ever was a time to split the missions, it is now with the massive organizational restructure effort and renewed interest.

This research has further reinforced the findings of Phase I and II of the Schlesinger reports in terms of the gradual atrophy of the nuclear deterrence mission for B-52s. It also discovered the historical link between the crews of SAC during the Vietnam War and those of ACC in the ongoing GWOT. Leaders in the 1960's disagreed with allowing B-52s to be employed in a conventional role to avoid the degradation of the nuclear commitment, but both can be done with the proper level of attention and consideration for crucial differences. Little did they know how prophetic those objections would become in the long line of conventional and irregular wars that followed the lessons of Vietnam and the end of the Cold War. It stands to reason that divided attention will lead to mistakes in a zero-defect climate and the proof is in the performance of the units that were dual tasked. If one wants the best effort from an athlete, they are not asked to play both cricket and baseball even though they have elements in common. It would be wise to allow crews to prove they are a "polished, skilled force"<sup>61</sup> in their directed specialty by keeping the two missions of national power separate and fully supported.

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<sup>1</sup> Phase I: *The Air Force's Nuclear Mission*, 2.

<sup>2</sup> *Ibid.* 35.

<sup>3</sup> Tagg, *Development of the B-52*, 22.

<sup>4</sup> *Ibid.* 53.

<sup>5</sup> *Ibid.*

<sup>6</sup> *Ibid.* 75.

<sup>7</sup> *Ibid.* 69.

<sup>8</sup> *Ibid.* 86.

<sup>9</sup> *Ibid.* 88.

<sup>10</sup> *Ibid.*

<sup>11</sup> *Ibid.*

<sup>12</sup> *Ibid.*

<sup>13</sup> *Ibid.*

<sup>14</sup> Worden, *Rise of the Fighter Generals*, 173.

<sup>15</sup> *Ibid.*

<sup>16</sup> *Ibid.* 181.

<sup>17</sup> *Ibid.* 174.

<sup>18</sup> Michel, *The 11 Days of Christmas*, 166.

<sup>19</sup> Worden, *Rise of the Fighter Generals*, 174.

<sup>20</sup> *Ibid.* 182.

<sup>21</sup> *Ibid.* 177.

<sup>22</sup> *Ibid.* 174.

<sup>23</sup> *Ibid.*

<sup>24</sup> Clark, *Strategic Air Command*, 6.

<sup>25</sup> *Ibid.* 4.

<sup>26</sup> Worden, *Rise of the Fighter Generals*, 174.

<sup>27</sup> *Ibid.* 175.

<sup>28</sup> Thompson, *To Hanoi and Back*, 10.

<sup>29</sup> *Ibid.*

<sup>30</sup> *Ibid.*

<sup>31</sup> *Ibid.* 265.

<sup>32</sup> *Ibid.*

<sup>33</sup> History, 28<sup>th</sup> Bombardment Wing, ex 43.

<sup>34</sup> History, 5<sup>th</sup> Bombardment Wing, 32.

<sup>35</sup> History, 28<sup>th</sup> Bombardment Wing, 34.

<sup>36</sup> *Ibid.*

<sup>37</sup> *Ibid.*

<sup>38</sup> *Ibid.* 35.

<sup>39</sup> *Ibid.* 36.

<sup>40</sup> History, 5<sup>th</sup> Bombardment Wing, ex 78.

<sup>41</sup> *Ibid.* ex 77.

<sup>42</sup> History, 22<sup>nd</sup> Bombardment Wing, 19.

<sup>43</sup> *Ibid.* 31.

<sup>44</sup> History, 7<sup>th</sup> Bombardment Wing, ex 97.

<sup>45</sup> *Ibid.* 103.

<sup>46</sup> *Ibid.* ex 97.

<sup>47</sup> *Ibid.* 103.

<sup>48</sup> History, 7<sup>th</sup> Bombardment Wing, 31.

<sup>49</sup> *Ibid.* ex 35.

<sup>50</sup> *Ibid.*

<sup>51</sup> *Ibid.*

<sup>52</sup> *Ibid.* ex 39.

<sup>53</sup> *Ibid.*

<sup>54</sup> History, 8<sup>th</sup> Air Force, ex 251.

<sup>55</sup> *Ibid.*

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<sup>56</sup> History, 72<sup>nd</sup> Strategic Wing Provisional, ex 31.

<sup>57</sup> *Ibid.*

<sup>58</sup> Worden, *Rise of the Fighter Generals*, 177.

<sup>59</sup> Phase I: *The Air Force's Nuclear Mission*, 3.

<sup>60</sup> *Ibid.* 51.

<sup>61</sup> History, 28<sup>th</sup> Bombardment Wing, ex 43

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